

DETAILED ACTION

Response to Amendment

Applicant's amendment filed on 7/13/2009 has been entered. Claims 15, 17, 24, 26, 28 and 29 have been amended. Claims 16 and 25 are cancelled. Claims 15, 17-25 and 27-29 are still pending in this application.

Response to Arguments

1. Applicant's arguments filed 7/13/2009 have been fully considered but they are not persuasive.
2. Regarding applicant's arguments that the prior art of record does not teach a broadcast/multicast service or a MBMS service paging indicator channel wherein the informing comprises transmitting several discontinuous reception cycles of paging indicators in the multimedia broadcast/multicast service-dedicated paging indicator channel (See Remarks pages 8-9), the examiner respectfully disagrees. Balachandran discusses mobile station monitoring only selected slots on the PCH and F-CCCH to save battery life, and further discusses a Quick Paging Channel (QPCH) that further conserves battery power by monitoring the monitored selected slots. Balachandran also discusses the QPCH has a duration of 80ms and is offset 100ms from the broadcast slot of PCH/F-CCCH. In other words, QPCH is only on for a brief period of time and discontinues for the remainder of the time until 100ms before the next broadcast slot starts again. Balachandran does not explicitly disclose discontinuous reception cycles. Choi is brought to show obvious that discontinuous reception is well known in the art ([0018][0074]). Therefore the combination of Balachandran and Choi discloses a

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broadcast/multicast service or a MBMS service paging indicator channel wherein the informing comprises transmitting several discontinuous reception cycles of paging indicators in the multimedia broadcast/multicast service-dedicated paging indicator channel.

Concerning the applicant's arguments regarding combination of references, both of the references are from the same field, i.e. communication systems and concern analogous topics. Therefore, the examiner contends that the references would be combinable to one skilled in the art.

Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follow.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15, 17-24, 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balachandran et al. (US 2005/0054331) in view of Choi et al. (US 2004/0180675).

Regarding claim 15, Balachandran discloses a method for transmission of data in a radio communication system having subscriber stations(see at least Abstract, [0033]-[0034]), comprising: informing the subscriber stations of a service which is provided for several subscribers (i.e. see [0030][0032][0033][0034] informing the mobile station of

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broadcast-multicast service content subscribed by the user), prior to the transmission of useful information (at least see [0030][0036]an indicators transmitted on QPCH precede BSPM transmitted on PCH/F-CCCH), by providing, via a broadcast/multicast service-dedicated paging indicator channel ([0010][0033][0035] a quick paging channel that transmits indicators for BSPM), a paging indicator for service control information on a service control channel ([0010][0033][0034] paging indicator for BSPM on PCH or F-BCCH; BSPM is the service control information defined in [0034]), wherein said informing comprises transmitting several discontinuous reception cycles of paging indicators in the broadcast/multicast service dedicated paging indicator channel ([0010][0016][0039][0049] the QPCH has an 80ms duration and runs on cycles such that it runs 100ms before the broadcast slot starts, therefore transmitting several discontinuous reception cycles).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claim 24, Balachandran discloses a base station ([0024]) for transmission of data in a radio communication system, comprising: means for informing subscriber stations prior to transmission of useful information as a service that is

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provided for several subscribers ([0033]-[0036]), and means for creating and transmitting ([0036]), to subscriber stations ([0038]), paging indicators for service control information on a service control channel, using a broadcast/multicast service dedicated paging indicator channel ([0010][0033][0035]).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claim 28, Balachandran discloses a subscriber station (i.e. Abstract and [0038]) for performing a method for transmission of data, comprising: means for receiving paging indicators at said subscriber station using a broadcast/multicast service dedicated paging indicator channel ([0010][0033] [0035][0038]), with either paging indicators of discontinuous reception cycles on the broadcast/multicast service dedicated paging indicator channel being periodically received or paging indicator information being received on a cell paging indicator channel to acquire a paging indicator on the broadcast/multicast service dedicated paging indicator channel([0033]-[0036]), and with the paging indicators provided for service control information on a service control channel ([0033][0034]).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claim 29, Balachandran discloses a radio communication system for transmission of data, comprising: at least one base station ([0009]) including means for informing subscriber stations prior to transmission of useful information as a service that is provided for several subscribers ([0033]-[0036]), and means for creating and transmitting, to subscriber stations, paging indicators for service control information on a service control channel, using a broadcast/multicast service dedicated paging indicator channel ([0033]-[0036]); and at least one subscriber station including means for receiving paging indicators at said subscriber station using the broadcast/multicast service dedicated paging indicator channel([0038]), with either paging indicators of discontinuous reception cycles on the broadcast/multicast service dedicated paging indicator channel being periodically received or paging indicator information being received on a cell paging indicator channel to acquire a paging indicator on the broadcast/multicast service dedicated paging indicator channel ([0033]-[0036]).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claims 17-18 and 26, combination of Balachandran and Choi discloses the method and apparatus of transmitting several discontinuous reception cycles of paging indicators in the multimedia broadcast/multicast service dedicated paging indicator channel and cycles having various repetition rates (see e.g. Balachandran: ([0009][0010][0016][0039][0049], and Choi: [0018][0074]).

Regarding claim 19 and 27, combination of Balachandran and Choi discloses a method in accordance with claim 18, wherein at least one paging indicator on the broadcast/multicast service dedicated paging indicator channel contains service identification information for at least one of various services and various types of service.

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver

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broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claim 20, Balachandran discloses a method in accordance with claim 19, wherein said informing further comprises receiving paging indicator information on a cell paging indicator channel at the subscriber station to acquire the paging indicator using the broadcast/multicast service dedicated paging indicator channel ([0010][0033][0035]).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding Claim 21, Balachandran discloses a method in accordance with claim 20, wherein the paging indicator information on the cell paging indicator channel contains several bits for indicating service information on the broadcast/multicast service dedicated paging indicator channel(i.e. [0042][0044]).

Balachandran discloses broadcast/multicast service ([0028]) but does not explicitly disclose multimedia broadcast/multicast service (MBMS). In analogous art, Choi discloses MBMS ([0046][0047]).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the invention of Balachandran, to deliver broadcast/multicast service in multimedia, as taught by Choi, thus allowing supporting of high-capacity data such as real-time image and voice ([0005]).

Regarding claim 22, Balachandran discloses a method in accordance with claim 21, wherein the paging indicator information on the cell paging indicator channel includes an indication of at least one of a service class and a paging-specific sequence number ([0041][0048]).

Regarding claim 23, combination of Balachandran and Choi discloses a method in accordance with claim 19, wherein said informing further comprises periodically receiving paging indicators of discontinuous cycles on the multimedia broadcast/multicast service dedicated paging indicator channel.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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